



Illinois Power Agency Power Hour Webinar 6

Decarbonization, from Coal to Renewables

Agenda



- **Introduction and Scope of the IPA Power Hour Webinars**
- **Decarbonization, Illinois Environmental Protection Agency Role**
- **Coal to Solar, Illinois Power Agency Role**
- **Coal to Solar, Illinois Department of Commerce and Economic Opportunity Role**
- **Q&A**
- **Closing**

IPA Power Hour Webinars

- **Introduction and Scope**

- **Power Hour is a newly launched series of educational and informative presentations on a wide range of clean energy topics and emerging issues**
- **Today's Power Hour:**
 - We will discuss how the Climate and Equitable Jobs Act (Public Act 102-0662) impacts decarbonization of coal generation facilities in Illinois and the transition from coal to solar. In addition, we will also highlight state agencies' role with decarbonization initiatives as required by the law.
 - Past and future IPA Power Hour Webinars will cover other topical areas impacted by Public Act 102-0662

- **Introduction and Scope**

- **We will not cover items from P.A. 102-0662 related to:**

- Stakeholder feedback processes related to the Adjustable Block Program opening and the Revised Long-Term Plan development
- Specific program or procurement requirements
- Issues outside the purview of the IPA such as:
 - Changes to ratemaking
 - Electric vehicle and transportation incentives
 - Programs administered by other state agencies

- **Completed Webinars**

- IPA Power Hour Webinar 1: Expansion of the Illinois RPS Under CEJA
- IPA Power Hour Webinar 2: CEJA's Impact on Adjustable Block Program
- IPA Power Hour Webinar 3: CEJA's Impact on Illinois Solar for All
- IPA Power Hour Webinar 4: CEJA's Impact on Utility-Scale Solar and Wind and Brownfield sites
- IPA Power Hour Webinar 5: Creating a Diverse and Equitable Energy Workforce

- **Upcoming Webinars**

- IPA Power Hour Webinar 7: *Carbon Mitigation Credits and CEJA's Support for At-Risk Nuclear Plants*, Friday, December 17, 2021; 12pm-1pm CDT

- **Recordings of Power Hours and registration links available at:**

- <https://www2.illinois.gov/sites/ipa/Pages/Events.aspx>

- **Independent State Agency created in 2007**
- **Agency duties include**
 - **Development and implementation of energy procurement plans for electricity supply for default service customers**
 - **Development and implementation of other procurement plans such as those to support at-risk nuclear plants (e.g., for Zero Emissions Credits and Carbon Mitigation Credits)**
 - **Implementation of the Renewable Portfolio Standard**
 - Development of Long-Term Renewable Resources Procurement Plan
 - Conduct competitive procurements for utility-scale projects
 - Manage programs for community solar and solar for homes and businesses

Decarbonization, IEPA Role



Illinois EPA

SB 2408 / PA 102-662

Decarbonization

Decarbonization Highlights

- ▶ **Phase out fossil fuel power sector units by 2045.**
- ▶ **Prioritize environmental justice and equity investment eligible communities, and facilities with higher emission rates.**
- ▶ **Account for any potential concerns for power grid supply and reliability.**
- ▶ **Explore carbon capture and sequestration and alternative pricing solutions.**

Zero Carbon Emissions Deadlines

- ▶ **Private coal and oil-fired units: January 1, 2030**
- ▶ **Municipal coal units: December 31, 2045**
 - Interim emissions reductions in 2035 or 2038, or retirement.
- ▶ **Private natural gas units: January 1, 2045**
 - Priority deadlines in 2030, 2035, and 2040 for units with higher emissions rates and those in or near EJ areas.
- ▶ **Municipal natural gas units: January 1, 2045**
- ▶ **Cogeneration or combined heat and power units: January 1, 2045**

Reliability Provisions

- ▶ **Allows units to temporarily continue operating after a deadline if there is a determination that ongoing operation is necessary to maintain power grid supply and reliability or is necessary to serve as an emergency backup generator.**
 - **If a Regional Transmission Organization (RTO) provides notice that the continued operation of the unit is required, the unit may continue operating until the issue is resolved.**
 - **Any unit that is not a participant in an RTO must receive approval from the Illinois Commerce Commission to continue operating.**

Joint State Agency Study on Progress and Reliability

- ▶ **By June 30 of each year, beginning in 2025, requires the IEPA, IPA, and ICC to jointly conduct and publish a study on the State's progress toward its renewable energy resource development goals and the current and projected status of electric resource adequacy and reliability throughout the State.**
- ▶ **Requires consultation with PJM and MISO regarding forecasted resource adequacy and reliability needs, anticipated new generation interconnection, and announced unit closures.**

Nonprofit Electric Generation Task Force

- ▶ Establishes a Task Force to assess the technological, economic, and regulatory feasibility, and legislative support mechanisms necessary to achieve the carbon emissions reductions targets that are contained in the decarbonization section of the bill through the use of carbon capture, sequestration, and utilization technology at Prairie State.
- ▶ The Task Force would also examine debt financing options for Prairie State.

Commission on Market-Based Carbon Pricing Solutions

- ▶ **Authorizes the Governor to create a carbon pricing commission to study the short- and long-term impacts of joining, implementing, or designing a sector-based, statewide, or regional carbon pricing program.**
- ▶ **Commission would analyze costs and emissions reductions from several existing state-specific carbon pricing programs and issue a report.**



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Coal to Solar, IPA Role

Coal to Solar-What is it?

- Encourage development of utility-scale solar projects on coal plant sites
- Utilize REC delivery contracts as tool to provide revenue certainty needed to finance development
- Encourage pairing storage with solar on-site
- Investment in just community transition, site remediation, etc.
- Leverage existing transmission/interconnection infrastructure

Competitive Utility-Scale and Brownfield Site Solar Procurements vs Coal-to Solar



- **Site considerations**
 - Utility-scale open-ended, brownfield must be brownfield
 - C2S must be at coal plant site
- **Location**
 - Utility-scale IL or adjacent states (public interest criteria)
 - C2S in IL (north or south of I-80)
- **Procurement Quantities**
 - Utility-scale and brownfield based on needed progress toward RPS goals
 - C2S prescribed by statute
- **Bid Evaluation & REC price**
 - Utility-scale and brownfield site evaluated based on price
 - C2S price prescribed in statute, applications up to a quantity

Competitive Utility-Scale and Brownfield Site Solar Procurements vs Coal-to Solar



- **Procurement frequency**
 - Utility-scale and brownfield site: annually? TBD
 - C2S: two discrete procurement events
- **Contract length**
 - Utility-scale and brownfield site: 15 years
 - C2S is 20 years for first, 15 years for second
- **Contract counterparties**
 - Utility-scale/brownfield; Ameren/ComEd/MEC
 - C2S: only Ameren and ComEd
- **Funding source**
 - Utility-scale/brownfield: Section 16-108(k) collections (used to fund other RPS activities)
 - C2S: Section 16-108(i-5) collections (also ratepayer funded)

Competitive Utility-Scale and Brownfield Site Solar Procurements vs Coal-to Solar



- **Contract development**
 - Utility-scale and brownfield site require consensus of utilities, comments for possible bidders
 - C2S requires contract development “in conjunction with” bidders
- **Labor requirements**
 - Utility-scale and brownfield site now require prevailing wage, project labor agreements
 - C2S requires prevailing wage, project labor agreements
- **Diversity, Equity, and Inclusion**
 - Utility-scale and brownfield site require compliance with equity accountability system
 - C2S requires filing of DEI plan with ICC

Location of Projects

- **Active coal plant as of 2016**
 - **Need not yet have retired at time of procurement event**
- **Plant needed to be or have been at least 150 MW**
- **Location of site is mostly prescribed**
 - **First procurement is south of I-80 but in Illinois**
 - **Second procurement is north of I-80 but in Illinois**
- **Plant-specific requirements**
 - **Cannot be muni or co-op coal plant**
 - **Must have been formerly owned by public utility**
- **“at or adjacent to” the coal plant site**

Coal Plants in Illinois



Proposed Solar/Storage Project Attributes ILLINOIS POWER AGENCY

- **For first procurement event (per project)**
 - **20-100 MW utility-scale solar project**
 - **2-10 MW storage facility**
- **For second procurement event (per project)**
 - **5-20 MW utility-scale solar project**
 - **500 kw storage facility**
- **Comparison to storage being supported by DCEO**

Procurement Quantities

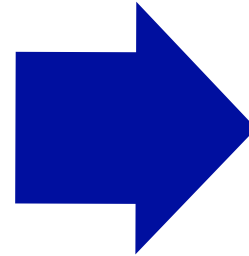
- **First procurement event**
 - Min 400,000 RECs
 - Max 580,000 RECs
- **Second procurement event**
 - No more than 625,000 RECs total
 - Net out first procurement event results
- **Installed capacity outcomes?**
 - ~300+ MW of new solar
 - Exact amount depends on capacity factors

- Statutorily prescribed \$30 per REC
 - Comparison with utility-scale procurements
 - Comparison with brownfield site procurements
 - Comparison with ABP
- Projects also feature storage
- 20-year contract REC delivery contract
 - Unless interconnected with PJM and over 1200 MW in coal plant size (then, a 15-year contract)
- Energy, capacity both not part of transaction

First Procurement Event

March 31, 2022, or May 1, 2022, for
procurement event (will be latter)

Energization by either June 1, 2023,
or June 1, 2024



Second Procurement Event

September 30, 2022, to October 31,
2022, for procurement event

Within next 48 months for project
energization

Extensions available to energization timelines for both

Next Steps

Event	Date*
Tentative Schedule posted	Monday, December 6, 2021
Supplier documents, including draft contract materials posted for stakeholder input	Late January 2022
Stakeholder engagement and consultation process on draft contract documents**	February 2022
Final Supplier Contract and RFP documents issued	Early March 2022
Proposal Window opens (Proposals may be submitted starting on this date)	Late March 2022
Proposals Due Date	Early April 2022
Procurement Process Concludes	Late April 2022
Commission renders decision on procurement results	Late April 2022
Contracts fully executed	Within 3 business days after Commission decision approving the results of a procurement event

*The schedule for this first procurement event will be updated with additional details by mid-January 2022. Interested parties should check the procurement website regularly for updates. Website registrants will be notified of any updates to this schedule by the Procurement Administrator.

**Pursuant to Section 1-75(c-5)(8) of the IPA Act, the REC contract will be developed by the IPA in consultation with the procurement administrator, electric utilities and potential applicants for the REC contract.

More information?

IPA Procurement Administrator Website

<https://www.ipa-energyrfp.com/coal-to-solar/>

Coal to Solar, DCEO Role

CLIMATE AND EQUITY JOBS ACT

***Illinois Department of Commerce
and Economic Opportunity***





Illinois Coal to Solar and Energy Storage Program



- DCEO to administer \$280,050,00 grant program to provide grants to support the installation and operation of energy storage facilities at sites of qualifying electric generating facilities.
- Up to five sites are eligible, two in the PJM service territory, three in MISO.

Illinois Coal to Solar and Energy Storage Program


Grant Conditions Per Statute

- Payments are shall be \$110,000 per megawatt of storage at each facility and \$28m per year for all facilities.
- Each site to have at least 37MW of energy storage.
- The grant payments will start following the date the storage facility is placed into commercial operation.



Illinois Coal to Solar and Energy Storage Program

Criteria to qualify for a grant:

- 
1. The facility has capacity of at least 150MW, or did prior to retirement
 2. Facility burns coal as its primary fuel source
 3. If facility is retired, it retired after Jan 1, 2016
 4. Owner of the facility has not been selected by IPA to sell renewable energy credits to a utility from the new solar site located at the retired coal plant
 5. Owned by a public utility at one time

Illinois Coal to Solar and Energy Storage Program

Grant Qualifications Cont'd



6. Is not owned by an electric coop, or an entity listed in subsection (b)(1) of Section 3-105 of PUA (i.e. no political subdivision or public university)
7. Proposed energy storage facility has capacity of at least 37MW
8. Owner commits to place storage facility into commercial operation by June 1 of 2023, 2024, or 2025. Dates are subject to adjustment as needed
9. Owner agrees facility will be constructed by a certified installer.
10. Owner agrees that personnel operating the storage facility have the requisite skills, experience, and competency, which may be demonstrated by completion or participation by an accredited or otherwise recognized apprenticeship program or through training offered by the owner to employees of coal powered plant.
11. Owner commits to paying the prevailing wage for construction. Owner must file a report with DCEO that prevailing wage compliance was met prior to commercial operation.
12. Owner commits to negotiating a project labor agreement, if selected, for constructing storage facility that includes requirements to establish diversity threshold requirements and improve diversity at job site, diverse apprenticeship opportunities, and opportunities to employ former coal workers.

Illinois Coal to Solar and Energy Storage Program

Grant Deadlines

- DCEO to accept applications until March 31, 2022, and announce award of grants no later than June 1, 2022.
- Grant payments are made in equal amounts for 10 years following the date the energy storage facility is placed in commercial operation.



Illinois Coal to Solar and Energy Storage Program



GATA Grant Requirements

- All grantees will have to be pre-registered with GATA in order to apply.
- [GATA Website: https://grants.illinois.gov/portal/](https://grants.illinois.gov/portal/)

Illinois Coal to Solar and Energy Storage Program

Workforce Programs

- Clean Jobs Workforce Hubs Network Program
- Climate Works Preapprenticeship Hubs
- Clean Energy Contractor Incubator Program
- Clean Energy Primes Contractor Accelerator Program

Questions & Answers